

ESO 1142

HOW MUCH CAN YOU PAY FOR LAND?

BY

ALLAN E. LINES
EXTENSION ECONOMIST

DEPT. OF AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY
THE OHIO STATE UNIVERSITY

NOVEMBER 1984

SOME APPROACHES

PAY WHAT YOU HAVE TO

PAY WHAT IT IS WORTH

PAY WHAT YOU CAN

ONE OF MOST DIFFICULT INVESTMENT DECISIONS

INFREQUENT PURCHASE

LARGE AMOUNTS OF MONEY

LONG-TERM OBLIGATION

DETERMINANTS OF LAND VALUE

OPPORTUNITY COST OF CAPITAL

LAND PRICES

LAND PRICE INFLATION

LOAN TERMS

GROWTH IN NET INCOME

TIME HORIZON

MARGINAL TAX BRACKET

CAPITAL GAIN TAX

NET INCOME PER ACRE

I N D E X V A L U E S

YEAR	CPI	OHIO FARMLAND	OHIO FARM NET RETURNS	PROD. COSTS
1967	100	100	100	100
1973	133	147	204	155
1974	148	184	239	194
1975	161	208	225	211
1976	170	252	204	233
1977	181	331	192	243
1978	195	373	201	265
1979	217	448	277	304
1980	247	516	191	338
1981	272	529	87	367
1982	289	453	122	377
1983	298	401	135E	386
1984	310	384	140E	394E

E = ESTIMATED

1985 CORN PRODUCTION BUDGET 1/
(Conventional Tillage Practices)

ITEM	EXPLANATION	PRICE PER UNIT	YIELD LEVEL			YOUR BUDGET
			90 bu	120 bu	150	
RECEIPTS		\$ 2.50 /bu.	\$ 225	\$ 300	\$ 375	\$ _____
VARIABLE COSTS						
Seed(kernels)	22000 k. 24200 k.	\$ 0.90 / 1000 kernels	\$ 20	\$ 22	\$ 24	\$ _____
Fertilizer 2/						
N	80 140 200 lb.	0.20 /lb.	16	28	40	_____
P205	33 44 56 lb.	0.22 /lb.	7	10	12	_____
K20	52 60 68 lb.	0.11 /lb.	6	7	7	_____
Lime	1000 lb.	15.00 /T.	8	8	8	_____
Chemicals						
Atrazine	2 lb. - 80W	1.75 /lb.	4	4	4	_____
Lasso	2 quart	20.75 /gal.	10	10	10	_____
Counter, 15-G	8.7 lb.	1.40 /lb.	-	- If Needed -	-	_____
Fuel, Oil, Grease			17	18	19	_____
Drying-Fuel &						
Electric Only	Dry 10 points	0.15 /bu.	14	18	23	_____
Trucking Fuel Only		0.02 /bu.	2	2	3	_____
Repairs			18	19	20	_____
Miscellaneous 3/			11	12	13	_____
Interest on Oper. Cap. 4/		13%	9	10	12	_____
7 months			_____	_____	_____	_____
TOTAL VARIABLE COSTS - Per Acre			\$ 140	\$ 167	\$ 194	\$ _____
- Per Bushel			\$ 1.56	\$ 1.39	\$ 1.30	\$ _____
FIXED COSTS						
Labor Charge	4 hours	\$ 4.50 /hr.	\$ 18	\$ 18	\$ 18	\$ _____
Mach. & Equip.. Charge 5/			50	50	50	_____
Land Charge	Rent		35	70	110	_____
Management Charge	5% of Gross		11	15	19	_____
TOTAL FIXED COSTS			\$ 114	\$ 153	\$ 197	\$ _____
TOTAL COSTS - Per Acre			\$ 255	\$ 320	\$ 391	\$ _____
- Per Bushel			\$ 2.83	\$ 2.67	\$ 2.61	\$ _____
RETURN ABOVE VARIABLE COSTS			\$ 85	\$ 133	\$ 181	\$ _____
RETURN ABOVE TOTAL COSTS			\$ -30	\$ -20	\$ -16	\$ _____

- 1/ Does not include costs or returns for storage of grain.
- 2/ Assumes only maintenance application of fertilizer needed, continuous corn, 3.8% O.M., and soil test values of 45 lbs. P/A. and 250# K/A.
- 3/ Includes supplies, utilities, soil tests, small tools, crop insurance, etc.
- 4/ Interest on all variable costs except drying and trucking.
- 5/ Estimated by adjusting 1983 OSU Farm Business Analysis for interest and inflation to reflect 1985 costs.

H O W M U C H I S A V A I L A B L E P E R A C R E
T O P A Y D E B T

ITEM	NEW FARMER	FARMER ADDING LAND	LANDLORD
RECEIPTS	\$300	\$300	\$150
EXPENSES			
VARIABLE	167	167	58
FIXED (EXCEPT LAND)	83	0	0
LAND TAX	10	10	10
CASH AVAILABLE TO SERVICE DEBT	40	123	82

BASED ON OSU 1985 CONVENTIONAL CORN BUDGET. CORN PRICE =
\$2.50 / BUSHEL. LANDLORD RECEIVES 1/2 CROP AND PAYS 1/2 ALL
VARIABLE EXPENSES EXCEPT FUEL (NOT DRYING), REPAIRS & MISC.

D E B T S E R V I C E C A P A C I T Y
P E R \$ A V A I L A B L E

INTEREST RATE	LENGTH OF LOAN				INTEREST ONLY
	15	20	25	30	
8	\$8.56	\$9.82	\$10.67	\$11.26	\$12.50
10	7.61	8.51	9.08	9.43	10.00
12	6.81	7.47	7.84	8.06	8.33
14	6.14	6.62	6.87	7.00	7.14
16	5.58	5.93	6.10	6.18	6.25

W H A T D E B T C A N E A C H

A C R E S E R V I C E

	NEW FARMER	FARMER ADDING LAND	LANDLORD
<hr/>			
20 YEAR LOAN			
10%	\$340	\$1047	\$698
12%	299	919	613
14%	265	814	543
30 YEAR LOAN			
10%	377	1160	773
12%	322	991	661
14%	280	861	574

WHAT PRICE CAN EACH FARMER PAY

30 YEAR LOAN

12% INTEREST

ITEM	NEW FARMER	FARMER ADDING LAND	LANDLORD
0% DOWN			
OTHER INCOME/ACRE			
\$ 0	\$ 332	\$ 991	\$ 661
\$ 50	735	1394	1064
\$ 100	1138	1797	1467
25% DOWN			
OTHER INCOME/ACRE			
\$ 0	443	1321	881
\$ 50	980	1859	1419
\$ 100	1517	2395	1956
50% DOWN			
OTHER INCOME/ACRE			
\$ 0	664	1982	1322
\$ 50	1470	2788	2128
\$ 100	2276	3594	2934

